CLAIMS

What is claimed is:

1. A method for automatically adjusting color gain of an ultrasound imaging system comprising:

filtering input power data with a wall filter to produce filtered input power data; and

processing said filtered input power data to produce a set of time-gain compensation data.

2. The method of claim 1 further comprising:

averaging time-gain compensation data values in said set of time-gain compensation data to produce a set of average time-gain compensation data.

3. The method of claim 2 further comprising:

converting values of average time-gain compensation data in said set of average time-gain compensation data to decibel average time-gain compensation values, wherein said decibel average time-gain compensation data values are in decibel format;

selecting a maximum value from said decibel average time-gain compensation data values; and

adjusting front-end gain of said ultrasound imaging system by adding said maximum value to said front-end gain.

4. The method of claim 3 wherein said front-end gain is adjusted to within a few decibels of a noise floor.

5. The method of claim 2 further comprising:

scaling said set of average time-gain compensation data to produce a scaled set of average time-gain compensation data.

6. The method of claim 5 wherein said scaling step comprises:

selecting a scaling value from said set of average time-gain compensation data; and

dividing said set of average time-gain compensation data by said scaling value.

7. The method of claim 5 further comprising:

equalizing said filtered input data by multiplying said filtered input data by a corresponding value from said scaled set of average time-gain compensation data.

8. The method of claim 2 wherein said averaging step includes averaging values of filtered input power data laterally to produce a set of mean input power data.

9. The method of claim 2 wherein said averaging step includes averaging values from said set of time-gain compensation data vertically.

10. The method of claim 1 wherein said set of time-gain compensation data may be used to compensate for attenuation of said filtered input power data as a function of depth within a patient.

11. An ultrasound imaging system including:

a wall filter for filtering input power data to produce filtered input power data;

a lateral averaging processor for processing said filtered input power data into a set of mean input power data; and

a time-gain compensation processor for processing said set of mean input power data into a set of time-gain compensation data.

12. The system of claim 11 further including:

a vertical averaging processor for averaging time-gain compensation data values in said set of time-gain compensation data to produce a set of average time-gain compensation data.

13. The system of claim 12 further including:

a front end gain adjustment processor for converting values of average time-gain compensation data in said set of average time-gain compensation data to decibel average time-gain compensation data values,

wherein said decibel average time-gain compensation data values are in decibel format.

14. The system of claim 13 wherein said front end gain adjustment processor determines a maximum value in said decibel average time-gain compensation data values and adjusts front-end gain of said ultrasound imaging system by adding said maximum value to said front-end gain.

15. The system of claim 14 wherein said front-end gain is adjusted to within a few decibels of a noise floor.

16. The system of claim 12 further including:

a scaling processor for scaling said set of average time-gain compensation data to produce a scaled set of average time-gain compensation data.

17. The system of claim 16 wherein said scaling processor determines a scaling value in said set of average time-gain compensation data and divides said set of average time-gain compensation data by said scaling value.

18. The system of claim 17 including a color optimization processor for equalizing said filtered input power data by multiplying said filtered input power data by a corresponding value from said scaled set of average time-gain compensation data.

19. The system of claim 11 wherein said lateral averaging processor laterally averages values in said filtered input power data.

20. The system of claim 12 wherein said vertical averaging processor vertically averages values from said set of time-gain compensation data.